

# Innovation Processes in Forest-related Recreation Services: The Role of Public and Private Resources in Different Institutional Backgrounds

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**Abstract** This article examines innovation processes in forest recreational services on the basis of case studies in five European countries with differing institutional backgrounds of forest ownership and access rights. The analysis reveals that forest-related recreation services are developed under varying institutional conditions and on public as well as private land. Ideas for innovations in recreational services may come from within but often outside the forestry sector. Financing is provided from public and private sources. Both public and private spheres have important roles in providing natural, human and financial resources and usually a network of public and private actors are involved in innovation processes. Of particular importance are cross-sectoral interactions between forestry and tourism. Greater institutional support is needed for the development of forest-

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related recreation services because the field is at an early stage of development. It is concluded that support should focus on providing ideas and financial resources for product development and on facilitating cross-sectoral interaction between forestry and tourism actors. A particular need is seen for development of models for durable interaction between land owners and tourism operators on a regional scale.

**Keywords** Tourism · Institutions · Property rights · Cross-sectoral networks · Europe

## Introduction

The development of new recreation services that are offered on forest land or by forest landowners is attracting increasing interest throughout Europe by policy-makers, land managers and researchers. Services including hiking, adventure, sports, nature or environmental education, hunting, fishing, berry and mushroom collection, cultural tourism and provision of accommodation are provided by many types of organisations, for example public or private forest agencies, nature and national park services, environmental education institutions, outdoor service businesses and organisations, and forest owners. A high proportion of these activities are offered by public institutions, often without user charges. The opportunity for public and private actors to create jobs and income in rural areas through recreation services is receiving growing awareness.

Forest and agricultural policies in European countries and the European Union (e.g., Common Agricultural Policy, Forest Action Plan, Rural Development Regulation) increasingly consider the role of forests and their multifunctional management in rural development. It is therefore important that forestry and rural development research combine forestry sciences and regional development knowledge (Vennesland 2004). Rural economic development strategies of the 1970s and 1980s focused on how to utilise forest (timber) resources as inputs to the industry sector in Europe. During the 1980s, as growth in the industrial sector flattened off or even became negative (Hyttinen et al. 2002), more localised strategies were introduced, allowing local communities to choose their own economic development policies, developing networks of small and medium-sized enterprises (SMEs), and making use of local resources. In Eastern European countries, rural development and SME development policies were emphasised after mid-1990s, in the frame of the accession process to the European Union. The development of forest-related services fits well into these new development approaches. During the 1990s the rural economic development research shifted from focusing on economic development strategies to focusing on strengthening the development of entrepreneurs. Nowadays, this entrepreneurial focus has been further developed into a focus on innovation. As forest-related services represent a relatively new sector alongside traditional forestry, there is a need to promote innovations in this field.

This paper examines the innovation processes behind the development of new recreational services on forest land in five European countries. The stakeholders

involved in the process and the resources they contribute are identified. Particular attention is placed on the role of public and private actors and resources. The case study countries have been chosen to represent a range of institutional settings with regard to access rights to forest land and dominance of public or private ownership. The countries span western and eastern Europe, and public and private initiatives. With this background, the article asks how innovators gain access to and use human, financial and natural resources. Looking at cases from countries with different institutional settings, the article asks to what extent public and private resources are used and in what ways public and private activities are coordinated.

The chosen cases are the following:

- Forest pedagogical services of a forest holding (Austria)
- Bird watching services by a nature recreation company (Finland)
- Sports and adventure services by an outdoor recreation company (Norway)
- Nature tourism services in a national park by a tourist company (Romania)
- Mountain bike routes offered by the Great Britain Forestry Commission (UK)

## Innovations in Forest-related Services

Modern innovation research goes back to Schumpeter (1911) who focuses in his economic analysis on the enterprise and the role of the entrepreneur in the economic process. Innovation generally denotes the introduction of novelties in an enterprise, or on the market. When Schumpeter (1911) introduced the term “entrepreneur”, this was linked to the production of “shipping goods” (Kilkenny 1998). A shipping good is a product that is shipped out of a region to be sold in a market somewhere other than where it was produced. On the other hand, a shopping good is a product that must be consumed where it was produced. Nature based tourism may be characterized as a shopping good as the consumer has to travel to the place where nature can be experienced.

Early conceptions of the innovation process (Rogers 1995) have gradually been replaced by more complex models. There is a growing consensus in the innovation system literature that innovation is an institutional process (Lundvall et al. 2002; Edquist 2001; Moulaert and Sekia 2003) and that it is not only the entrepreneur that is responsible for the innovativeness of the firm. Innovation takes place within networks of actors that are of diverse kinds, public or private, and from different social systems, economy, research, state (Pyka and Küppers 2002). These actors are embedded in a system of institutions that support them. Authors refer to such systems as ‘innovation systems’ (Lundvall 1992; Edquist 1997; Nelson 1993). Institutional systems provide important functions to innovation processes: providing information, giving incentives as well as managing co-operation (Edquist and Johnson 1997).

Innovation in the service sector has been a topic of growing interest among researchers and policy makers (Hjalager 2002; Walder et al. 2006). Services differ from products in many ways (see e.g. Miles 2003). For instance, many services are

intangible and cannot be stored or transported. Services are often interactive, i.e. customized to particular client needs. There is a large diversity in the service industry and the nature of service varies (Miles 2003). A large part of this industry is for example highly technology intensive and the link to nature based tourism and micro enterprises is not obvious (Hollenstein 2003). Within the field of innovation in tourism there is a significant amount of literature focussing on nature based tourism (e.g. Hallenga-Brink and Brezet 2003; Hjalager 1994).

In the marketing of tourism services, emotional factors are of growing importance. Clients increasingly do not pay for the basic service they are offered, e.g. a bed and food, but for a wider experience. Tourism marketing speaks of the staging of a tourism product or destination (Weiermeier and Brunner-Sperdin 2006). Pine and Gilmore (1999) observe this trend and see the dawn of a new economic era, which they refer to as the ‘experience economy’. They say that “goods and services are not longer enough. Experiences are the foundation for future economic growth”. After the marketing of commodities, goods and services, the future will belong to experiences and transformations. The authors argue that consumers are not charged any more for the activity the provider performs (in the service business) but for the feelings customers have because of engaging the service provider (experience business) or the personal transformation they undergo (transformation business) (Pine and Gilmore 1999). The concern of innovation would be how to create “meaningful experiences” for the consumers (Boswijk et al. 2005). “Experiential services” focus on the experiences of the clients when interacting with the service providers, rather than just the benefits following from the products and services that are delivered (Voss and Zomerdijs 2007). Product and process innovation occurs hand in hand and incremental process innovations and further developed business models are particularly characteristic for the experiential services. According to Voss and Zomerdijs, the uncritical use of manufacturing-based frameworks may not be appropriate for the study of innovation in the service sector.

Studies in many countries demonstrate clearly that the tourism sector is dominated by micro and small enterprises, and that most of them are owned and operated by a single person or family (Hjalager 2002). Family businesses often differ from larger enterprises in their goals and business methods. The owners of family businesses do typically not behave in the classical expectation in direction of growth and profit maximisation (Carlsen et al. 2001). They are oriented at the needs and preferences of their families and they are often not willing to expand further on or to move their business to a site with more ideal conditions (Vennesland 2005). Enterprises offering nature based services are mostly located in sparsely populated areas in the countryside. In this situation, the need to collaborate becomes important (Vennesland 2004), for example in the marketing of the area as a tourism destination (Ritchie and Crouch 2005). Although competition is an important factor in triggering innovation, also trust among enterprises is important when it comes to collaboration in the development of innovations.

In course of the work of the Project Centre INNOFORCE of the European Forest Institute, among other surveys and case study collections, a representative survey of forest holdings was carried out in 2001 in Central European countries. The data

reported here cover Austria, the Czech Republic, Germany, Hungary, Italy and Slovakia. The research has revealed that environmental and recreational services are typically included in the product mix of forest holdings, however, on average they do not yield significant profit to forest holdings (Rametsteiner et al. 2005; Rametsteiner and Weiss 2006a, b; Weiss and Rametsteiner 2005). Recreational services make up for around two percent of the forest holding's turnover in average; income from nature conservation is negligible (Rametsteiner et al. 2005: 49). Single forest holdings, particularly such located close to larger urban areas, nevertheless, may make good profit from services like renting camping sites and horseback riding licences. In few forest companies, non-traditional income sources override the income from timber. While they generally do not contribute much to the profit of land owners today, a good part of innovation activity is connected with new services. When compared to technological (14%) and product innovations (18%), organizational novelties (39%) and new services (29%) dominate the picture (Rametsteiner et al. 2005: 56). As recreation leads the field in service innovations, recreation services might grow considerably in importance in the future.

These innovations are often not opportunity-driven but are developed in order to defend legal restrictions because of the high public interest in the recreational use of forests (Rametsteiner et al. 2005). As sectoral innovation systems of mature industries typically focus on process innovation in the main business area (Breschi and Malerba 1997), forestry agencies have not put much effort into promoting diversification of recreation products and services. Many forest owners and foresters have a very reserved attitude towards recreational services in their forests. Foresters are strongly oriented at timber production as their main business. The traditional discourse of multi-functional forestry saw other forest-related services as by-products that come naturally in the wake of timber production (Glück 1987; Glück et al. 2000). The function concept blocks a market-oriented perspective on non-timber products and services. Foresters are used to fend off societal demands on forest-related services on political level and not to see recreationists as potential clients. The realisation of profit from recreational services is closely related to an entrepreneurial attitude, as proven for land owners or companies offering nature-based recreation services in Norway (Nybakk and Hansen 2007).

## Public and Private Resources in Innovation Processes

Following Marshall (1890), the resources used in economic development are land (natural resources), labour (human resources) and capital (financial and man-made), whereby social capital can be seen as included in the category of labour (Castle 1998). We modify this classification and use it in our cases as follows:

- Natural resources: land, ecosystems, landscapes, plants and animal species e.g. trees or birds.
- Human and social resources: knowledge, skills and trust necessary to enable processes such as networking and activities such as the development of strategies and conduct of market research.

- Financial resources such as external funding from economic development projects, grants and subsidies, and internal funding from personal loans and revenue from business operations, and man-made infrastructure such as roads, visitor centres and interpretation.

The natural resources used in forest related recreation services are public e.g. on state land or private e.g. on the owner's land or that of another private individual or organisation. Entrepreneurs that want to offer forest related services usually need access to respective forest land. This access can be provided by ownership, by contract or may be provided free. In many countries, forest laws allow the public free access to (public and also often private) forest land for recreational purposes, however, this is usually limited to personal use and excludes commercial recreation activities. In the field of forest-related services, ownership rights are typically restricted in order to conserve biodiversity or to provide access for recreational purposes for the public. Free access to forest land is justified in situations where the provision of services through market mechanisms would result in a shortfall of supply (market failure). On the other hand, public provision of services limits entrepreneurial possibilities. In cases of free access to forest land, marketing of recreational services is possible in packages with add-on services, like special attractions, restaurants, etc. (Mantau et al. 2001). Many forest-related recreational services have a strong experiential component: wildlife safaris, survival trips, manager trainings, nature education by a real forester, and organised adventure/outdoor programmes largely live from the personal contact and the comprehensive experience they offer.

In the area of human resources, labour, research and education institutions and activities as well as extension services are important for the development and implementation of innovations. Besides private funding (e.g. innovator's own resources or bank loans), different sources of public funding exist. These may be in direct form such as grants from regional or rural development programmes but also in indirect form through the provision of certain services by public institutions that decrease the amount of necessary investments, e.g. it is not untypical that public forests or nature parks can be used for free for commercial uses or that infrastructure like roads or hiking trails are provided by public bodies. Most national, regional and local area tourism marketing activities are supported by public agencies (including non-tourism sectoral activities such as farm holidays etc.).

In the countries this article refers to, institutional settings differ considerably with regard to access to forest land and dominance of forest ownership. Our cases cover countries with mixed ownership (Romania, Wales/UK) and countries where private forest ownership dominates (Austria, Finland, Norway and UK). In Romania, public forest ownership dominated until recently, but with further restitution phases after 2001 and 2004, private ownership has increased. Access is free to all forests in Austria, Finland, Norway and Romania for personal non-commercial use within the scope of everyman's rights, however, in the Scandinavian countries even commercial use is mostly tolerated to a certain extent (Norway) or if no significant harm is caused to the landowner (Finland). In the UK (except Scotland) most public forests are open for public use for free and they usually allow small scale

commercial activities. For larger scale commercial activities and those requiring use of motorised vehicles a fee may be demanded.

## Case Studies of Innovations in Forest-related Recreation Services

### Case Study Descriptions

The core of this article is a comparative analysis of innovation cases across five European countries with different institutional settings. Innovations in forest related recreational services that have been introduced by specific enterprises have been chosen as case studies. The innovations may have been introduced by a forest holding, by a different enterprise such as a tourism firm, or may have been the main service of a new start-up. Cases were chosen at the enterprise level but in order to understand innovation processes more fully, the local, regional, national and supra-national setting of and their impacts on innovations were also explored. For the same reason, although enterprises were put at the centre of the analysis, relevant institutional actors, programmes and policies were also included.

The case data have been collected using common guidelines. The data were collected between 2002 and 2005 and were analysed in course of the European COST Action E30 (<http://www.joensuu.fi/coste30>). The data collection methods comprise face-to-face and telephone and e-mail surveys with core actors of the innovation. At least one personal or telephone interview was conducted for each case. Additionally, written sources such as internal planning documents, internal or official project documentations, press releases, newspaper articles, information on websites, brochures and the like were used. In most cases the sites and enterprises were visited.

The case study descriptions include information on their institutional background, i.e. forest ownership structure and access rights in the country; a description of the innovation; and an analysis of the innovation process including the role of actors and the resources used.

### Forest Education Services of a Forest Holding (Austria)

In Austria, 80% of forest land is privately owned and timber production is the dominant goal of most public and private forest owners. With regard to recreational uses of the forests, the owners' property rights are partly restricted by the forest law: Everybody has access to any forest land for recreational purposes. Furthermore, berries and mushrooms may be collected for personal use unless the forest owner explicitly prohibits their collection. For commercial uses, the approval by the owner is necessary. There is not a high awareness in the sector of and openness towards recreational services of the forest with the exemption of forest education (in German: Waldpädagogik), which is strongly promoted by public agencies and private owners and organisations. The engagement in forest education, however, is

mostly connected with public relations goals for forestry rather than commercial business goals.

The forest holding Gutenberg, Styria, comprises of 1600 ha which are managed by the private owner Ulrich Stubenberg. Since 1999 the forest holding offers guided tours to the forest and other forest educational activities for school children and adults. The innovative aspect of this case is that the company is developing the field further with the aim to open up new markets, e.g. training of managers and other outdoor programmes for adult clients.

The initiative for the new service came from the company's forester who came across an announcement of a forest training school for a forest education course. The forestry subsidy programme offers funds for forest educational activities for school children under the title of public relations work. Strong engagement of public forestry institutions in the field helped to develop and diffuse quickly this new field of service. The case falls into the diffusion stage of innovation, as the subsidy programme, training courses and a 'platform of forest educators' already existed. For the company, the challenge was and still is to develop this field from a public relations activity to a commercial service. While the school tours—the dominating field—are only financially viable thanks to public support, programmes for companies are profitable without public funding. The plan of the owners is therefore to limit the subsidised part of the activities and to further develop the profitable adult programme.

#### Bird Watching Services by a Nature Recreation Company (Finland)

Fifty-three percent of the total forestry land in Finland is possessed by non-industrial private owners, 8% by private companies and 34% is owned by the State. The statutory nature conservation and wilderness areas are mainly located on State land in the northern part of the country, whereas the highest recreational pressure is in the southern part of Finland. Nature services are one of the fastest growing branches in the tourism sector in Finland. Mostly these services are based in forests. Access to recreational use of forests is free for all in Finland without the permission of the landowner. This includes the commercial recreational use of forests.

The company Finnature Oy Ltd. provides bird watching and wildlife tours. Their innovativeness lies in the business concept: Finnature has found suitable markets by targeting their products directly to foreign tourists in co-operation with international travel agencies. In addition their network based working method has provided them the needed resources to concentrate on their special area of expertise (guidance and bird watching) and reduced the risks of high investments.

Finnature has used both private and public resources in their development process. The main success factor was the wide knowledge of the entrepreneurs on bird watching, their experience in organising tours and good knowledge on the customer's needs prior establishing the company. An important actor for co-operation has been Bird Life Finland. This NGO has brought a positive image to the company as well as some customer contacts. The co-operation with other companies has also been essential e.g. in providing visibility, ancillary services and knowledge



on business management and marketing. The most significant public service in the process has been MEK (Finnish tourism board) offering valuable marketing assistance. Also development projects have contributed resources and linked to public services. In addition the municipality of Liminka and regional authorities have been very active in developing nature tourism in the area e.g. by providing infrastructure facilities. Finnature operates mainly on the State's land area and the co-operation with Metsähallitus (national Forest and Park Service) has been significant. The case points out that the success in specialised nature tourism sector requires in addition to good business idea, a solid business concept in order to implement it.

### Sports and Adventure Services by an Outdoor Recreation Company (Norway)

Seventy-five percent of Norwegian forest lands are privately owned, the major part of which is owned by farmers (full time, or part time). Everyman's right is strong in Norway and therefore the difference between private and the public owned land in relation to public access and to the use of most non-timber forest products and services is relatively small. Access to all types of forests is free for all. Formally the everyman's right is restricted to non-commercial use, however, commercial tourism is usually tolerated.

Troll Mountain AS is a private company which offers outdoor adventure activities. Tim Davis and his wife Gjertrud Forgard founded Troll Mountain AS in 1993 as a limited company. Tim Davis has a professional background as an officer in the English military. His background in physical activity was important when planning Troll Mountain. The innovation was to adapt well-known products to local facilities and to connect adventure packages to local nature.

The main actor in the innovation process has been the owner of the firm, Tim Davis. Neighbours and local communities were also important as they provide land and services for Davis' business. Inspiration and ideas to develop new products and information on international markets were provided by the 'European outdoor life' network with important collaborators from Germany and Austria. Public resources that are used are: rivers, mountain areas and wildlife (beavers, moose) etc. as well as hiking trails. Private resources are fishing rights, buildings, and the personal skills of owner and of employees. Troll Mountain cooperates with a private land owner from whom they rent a climbing rock, and with Agder Energy who manage a check dam and who control the flow of water in the river which is used for rafting and other water sport activities. A lack of cooperation among local businesses and with public actors is seen by the business owner as a restraining factor when it comes to the creation of a common strategy of tourism activity within the area.

### Nature Tourism Services in a National Park by a Tourist Company (Romania)

Until recently 90% of Romanian forests were public-owned. After three phases of restitution of forests there is a more balanced ownership structure today with half

public forests, half other forest owners such as private individuals, private entities, forest communities and proprietors (the communes). The use of forests for recreational purposes is free of charges, irrespective to the ownership, and irrespective to whether the recreational activities are commercial or non-commercial. An agreement with the land owner is required only in the case of organised harvesting of forest products such as berries or mushrooms.

The innovation case here regards the development of commercial private recreation services on public land, inside a National Park. In 1998, the owner of a local business started the cooperation with the Carpathian Large Carnivore Project. One year later the owner launched his tour operator “Carpathian Tours”. The innovative aspect of the service is not only to offer accommodation like many other tourism structures in the surrounding area, but also services for wildlife observation and organised forest-based recreational activities. The tour operator receives yearly around 500 tourists.

The key actors are from outside forestry, except the national park administration (a public forest management structure). The idea for the innovation came from the eco-tourism programme ‘Wolves, Bears, and Lynx in Transylvania’ developed by the Carpathian Large Carnivore Project. The people responsible for this programme were very active in providing knowledge and co-ordination at the beginning of the service development. Later, the staff from the national park administration provided their services for discovering wildlife and for practising other nature-based activities. The local branch of ANTREC (National Association for Rural, Ecological and Cultural Tourism) had also an important role in coordinating the involved actors. ANTREC members are owners of small accommodation structures mainly in the surrounding rural areas (guesthouses). The innovator, who is not from the forestry sector, brought his previous experience in business management abroad to the service innovation development. The financial resources involved were exclusively private (the innovator’s own investment). The innovation did not need special infrastructure, except for tourists’ accommodation. The natural capital played an essential role. Without the beautiful landscape and the presence of large carnivores in the area, the innovation would have not been possible.

### Mountain Bike Routes Offered by the Forestry Commission Wales (UK)

In Wales, the country of the UK case study, just over half of forests are in private ownership. National forest strategies place a strong emphasis on the promotion of forests for recreation and tourism. In Wales, Forestry Commission who manages public forests allocates its land for public access. This is free so long as people use non-motorised transport and do not conduct large-scale commercial activities.

This case study explores the development of mountain biking trails at a state owned forest at Coed Y Brenin in mid-Wales. The development involved the construction of specialist mountain bike routes in the forest and associated services both on and off site, (for example, provision of food and drink, bike hire, bike cleaning facilities and accommodation). The product was new to Wales (and the UK) but also an innovative approach to trail building was taken which resulted in an

internationally renowned technique which is environmentally sustainable. In 1999, the site, which is regarded as one of the best in the world injected around £1 million into the local economy which has supported established businesses and new enterprises.

The idea and impetus of the trails came from mountain bike riders, (one of whom was the local forest ranger for Forestry Commission Wales) and a local mountain biking organisation (North Wales Mountain Bike Association). The adoption of the innovation depended on the support of the Forestry Commission Wales, the forest manager at Coed Y Brenin, the rugged and robust terrain necessary for the trails, funding and co-ordination for the work. Other funding was provided through European Objective One finances, and through sponsorship from high profile companies like Red Bull and Karrimor. Information from mountain bikers and mountain bike organisations was very important in the design of the trails. Later a broader range of stakeholders, for example local tourism service providers, local communities and tourists boards, became involved to provide complementary services such as accommodation, food and drink, to reduce conflict between uses and users and to market the enterprise. The Welsh Mountain Bike Initiative was central to the Welsh Tourist Board Cycle Tourism Strategy and the tourist board played a central role in the marketing of the sites by funding the Mountain Bike Wales website ([www.mb.wales.com](http://www.mb.wales.com)). The mountain biking community is relatively close knit and so the passage of information through users and their representative organisations has been critical in raising awareness and use of the trails. Local tourism businesses also market the trails as a way of attracting clients.

## Comparative Analysis of the Innovation Processes

The case studies explored in this paper cover forest recreation services which can be characterised as being innovative in terms of either the product(s) they offer and/or the process through which products have been developed and supplied. Both types, product and process innovations regularly occur in combination as new processes are needed to produce or market new services. The latter is important particularly in the cases from Finland and Norway. In all studied cases, the innovations are of incremental character, as they take an existing idea from another sector, region or company and adapt them to the forestry sector (e.g. in Norway), region (e.g. in Romania) and/or the specific situation of the own company (e.g. in Austria).

*Networks of actors* have been important, and in most cases, fundamental to successful innovations. In the networks innovators actively co-operate with other entrepreneurs, companies and/or organisations from outside of their own expertise in order to deliver demanded products or services. With the exception of the case from Norway, the involvement of both public and private players has been important in innovation networks. The cases demonstrate a strong propensity for cross-sectoral working between the forestry, tourism and economic development sectors with actors who have responsibilities from the local and regional level through to the national and international scale (horizontal integration). Business to business and business to local community co-operation (vertical integration) also

plays a fundamental role in all of the cases, particularly to provide complementary services such as accommodation, food and drink. The roles of actors within the innovation process is summarised in Table 1.

As we can see from Table 1, *ideas and impulses* for recreation services tend to come from the individual innovators' personal interest, for example in Wales case from the forester's interest in mountain biking, in Finland from the innovator's interest in bird watching and in Austria, the forester formerly had the wish to work in a kindergarden. In addition, the role of public initiatives was frequently mentioned as stimulating ideas in the cases, for instance, regional development projects in Romania and Finland, and training courses such as in Austria. Professional networks of for example foresters, nature conservationists, mountain bikers or outdoor operators contributed in all our cases. It also highlights (e.g. the Finnish, Romanian and Norwegian cases) that the ideas and impulses can come from actors outside the forestry sector. These findings suggest there is an absence of stimuli for and diffusion of new forest recreation products and services from institutional actors from forestry. Owners of larger forests and professional foresters mostly do not engage in tourism business because they do not see great opportunities in this sector but also because by tradition they may not want "non-forestry" persons in their forests. Farm forest owners usually have their innovation focus on their agricultural land and products.

When it comes to delivering products and services, working with a broad range of actors becomes critical. The cases indicate that knowledge to reduce riskiness of operations, finances to develop infrastructure and services, and the co-ordination, come through linkages between actors across the forestry, tourism/recreation, economic development and environmental protection sectors. In some instances, however, whilst forest land is utilised, products and services are delivered almost without interaction with the forestry actors. In the Finnish case, for example, besides of the National Forest and Park Service no forestry actors were involved.

*Natural resources*, and forests in particular, are a central feature upon which enterprise is based in all of our case studies, for example, in the Welsh case, the rugged terrain and visual screening quality of trees were important in developing exciting yet, unintrusive, mountain bike trails. In the Finnish and the Romanian case, viewing of wildlife—birds and large carnivores—was fundamental. In the cases from Norway and Austria experience of and interaction with the natural environment was core for sports and forest education. Both public and private sector actors provided access for land and wildlife. The Finnish and Romanian innovations used regional nature based state funded conservation as a platform on which to base their company's development, however in the Austrian and Norwegian case studies privately owned natural resources have been core basis for innovations.

Our cases demonstrate that *human and social resources*, that is for example, knowledge in the subject of the service being developed (such as guided bird watching tours or forest education), skills in the delivery of services or business activities (such as marketing), and trust between actors, are fundamental to successful innovation. Trust is particularly important in ensuring productive networking between actors. In the case of the Finnish firm, vertical linkages with complementary services such as transport and catering reduced the riskiness of the

**Table 1** Roles of actors in the innovation processes in five case studies

Roles of actors	Austria	Finland	Norway	Romania	Wales in the UK
Provision of ideas and impulses for innovations	Forester	Non-forester	Non-forester	Non-forester	Forester
Provision of natural resources (ownership)	Forested landscape of forest company (private)	Wildlife in state forests and national parks (public)	Forested landscape on land of different owners (private)	Wildlife in national parks (public)	Forested landscape on state forests (public)
Provision of human and social resources	Innovator (private) Forestry training school (public) Platform of forest educators (public)	Innovator (private) Nature conservation organisation (private) Tourism businesses and organisations (private & public) Economic development business and organisation (private & public) Innovator (private)	Innovator (private) Tourism organisation (private)	Innovator (private) Nature conservation organisation (private) National park administration (public)	Innovator (private) Consumers (private) Tourism organisation (public) Forestry organisation (public)
Provision of financial resources	Innovator (private)	Transport business (private) Tourism organisation (public) Municipalities (public)	Innovator (private)	Innovator (private) Agriculture and forestry organisations (public) Municipality (public)	Economic development organisation (public) Forestry organisation (public) Outdoor operators (private) Tourism organisation (public)

operation as the investments required to start the enterprise were reduced and the company did not have to operate in areas where its expertise lacked. In Wales, marketing knowledge came from the regional tourist board but vertical linkages with other businesses provided additional marketing for mountain bike innovations, as accommodation providers marketed forest mountain bike facilities in order to attract people to their businesses. Mountain bikers and mountain bike organisations provided information on how to design trails. A lack of trust, described in the Norwegian example, may hamper innovation and business development through an absence of regional sector strategies and cooperation. Both public and private actors may fulfil the role of coordination between the many actors involved and often, within one case, both public and private actors fulfil this function together. One typical coordination task is resolving land-use and other conflicts that may arise from new business activities in a region. In Wales, for instance, the mountain bike developments caused resentment from the local community because of increased noise and congestion in and around the forest.

Injections of *financial resources* have also been a necessity to enable the start up of all of the cases profiled in this paper. Both the public and private sectors have been closely involved in providing finance. The Romanian, Norwegian, Finnish and Austrian innovations were strongly financed by private sources, for example personal loans or incoming revenue from the tourism operation itself. This kind of approach to financing may be particularly viable where a low level of investment in infrastructure is required. It may have benefits if it enables businesses to be economically sustainable from an early stage and to build up their activities slowly and in a planned manner. Sometimes, as in the case of the Welsh mountain biking study, the role of private actors in providing finance was not particularly critical in terms of the sums of money provided, but rather the kind of image that was gained from the association of sponsors and innovators, for example good publicity for the sponsors and the creation of a high profile and desirable identity for the innovation.

Public sector funding to innovators has come through development projects (e.g. in the Romanian case study) and European Union structural funds (the EU Objective One programme in Wales) or rural development funds (e.g. in the Austrian case). Also important in all of the cases has been indirect funding of innovations through the provision of public infrastructure. Some of this infrastructure was general ancillary services such as roads and public transport, whilst others were recreation specific, for example, hiking trails, visitor centres and car parks. In the case studies, both the public and private sector provided recreational infrastructure, whilst the general ancillary services were funded by public sector actors.

Public provision of finance is probably especially important in situations where a high level of facility development is required (for example in the Welsh study public funding was used to build mountain bike trails). Experience in the provision of mountain biking in Wales illustrate that public funding is often limited in time and thus can create difficulties for the economic sustainability of enterprises when it expires. For example, the money required to maintain the Welsh mountain biking web site and to pay the salary of mountain bike rangers has run out. A key challenge therefore lies in finding reliable sources of funding over long periods of time. Public funding also plays an important role in knowledge provision and networking.

Examples of this are development projects (Finnish and Romanian cases) and the support of training courses and a platform for forest educators (in the Austrian case).

In sum, it is interesting to see that there were no clear trends regarding the role of public and private sector actors in the processes of innovation and in terms of the resources they contribute. Both may provide changing resources to the innovation process.

## **Institutional Analysis**

The case studies illustrate a range of combinations of public and private activities on public or private land. The Welsh case study represents an example of public activity on public land. There the objective was not to generate profit for the public forest owner or manager (Forestry Commission Wales) but instead to provide public service to support local economies through visitor spending, to generate health benefits to mountain bikers, as well as to build community capacity and social inclusion benefits (for example through local people being involved in volunteering and youth programmes).

Both the Finnish and Romanian case studies illustrate private activities (guided nature and cultural tours) on public land. The public land owners allow private business activities with similar intention for regional development. The Austrian and Norwegian case studies illustrate private activity on private land. In the Norwegian case, the adventure sports were carried out on the entrepreneurs' land and the land of other forest owners. In the Austrian case activities were conducted only in the forest of the innovator (the forest holding). The aim with both these case studies was to generate profit.

We see therefore that innovation in forest recreation can occur in a broad range of institutional conditions in relation to natural resource ownership situations. Private land use does not preclude recreational innovation taking place, neither does public land ownership. However, in our case studies, there are differences between the objectives and nature of provision across different institutional conditions, with private ownership and activity being focused on profit making, and public ownership and activity aiming to deliver a broad range of social and economic benefits to society. This can be interpreted as a trend, not a strict rule. It seems that the dominance of public or private land ownership has an influence on national policies for the public land: In Romania and Wales, where private ownership is not so strong as in the other case study countries public land has been opened for private businesses and dedicated for regional development goals (about half of the forests are public in Romania and Wales compared to only 15–34% in Austria, Norway and Finland).

In all of the case study countries, except Wales, legislation provides free access to public and private forests for non-commercial activities (so-called everyman's right). There is no legal access to forests in Wales unless specifically designated or classified as being land open to public access. Usually, the picking of mushrooms and berries by individuals for non-commercial uses is understood as a recreation activity and is therefore free. Commercial activities in forests usually require the

permission of the land owner and may be charged. In Finland, such permission is not, however, required.

In the Wales, small scale commercial activities are free on public land. Only the Romanian legislation provides free access for commercial activities on both public and private forest land. In Austria, Norway and Finland, commercial recreation operators must typically seek permission of the land owners prior to using forests.

The cases illustrate how the institutional conditions in relation to commercial use of forest land are negotiated by customary practices and individual co-operations between land owners and tourism operators. In Norway and Finland, for example, whilst everyman's right does not extend to commercial activities, customary practice means that usually activities are practised without land owner consent or are tolerated by land owners. The physical nature of many forests, for example their extensiveness and their visual screening properties, mean that the use of woodlands by tourism operators can go unnoticed by land owners. In these situations land owners provide free benefits to tourism enterprises. The degree of tolerance of forest managers to free use of their land by tourism enterprises may depend on the extent to which they feel the need to diversify into recreation provision themselves and the degree to which recreational activities impact upon other land or forest management objectives, for example, timber production.

As our case study in Finland illustrates, free public access to forests can create challenges for commercial innovations where users are unaccustomed to paying for certain activities and experiences, for example, to walk or to view wildlife. This means that nature tourism enterprises have to find ways of providing specialised services for which people are prepared to pay and for which there is sufficient market demand. In the case of the Finnish study, this involved tailoring services to international rather than domestic visitors. It suggests that support may be required to enable innovators to link product ideas with consumer demands.

Operating on the basis of free access may be less than ideal for the business development because of the lack of control over the land management activities, which diminishes the range of services they are able to develop. On the other hand, the land owners may struggle to fund management actions required to facilitate recreation services. The Norwegian case shows how co-operation between an operator and land owner can be used to negotiate institutional conditions to create innovative solutions to these land use 'problems'. In this case, even though free access to forests for commercial purposes was generally permitted under customary practices, the innovator paid for the use of a climbing wall in the hope of gaining good will from the land owner to improve hiking trails and develop car parking facilities.

## Conclusions and Policy Recommendations

The studied cases in recreational innovations illustrate new products (such as guided bird watching tours and mountain bike trails) and new ways of working (that take a network or partnership based approach to provision) and demonstrate that both product and process related innovations can be present within the forest recreation



sector. The cases mirror institutional conditions in the respective countries. As only one case per country was chosen, they cannot be understood as fully representative of the situation and experiences in each country. However, the cases provide useful understanding on a range of issues important to innovation processes in forest recreation services. In particular, the cases profiled in this paper suggest the following:

- Innovations occur in different institutional settings

Natural, human and social, and financial and man-made infrastructure resources are all required for successful innovation. These resources may be provided by public or private sources, in various combinations. Because of this, innovations in forest recreation services may equally well occur on private and public land and can be carried by public and private actors. Institutional conditions are likely to have a fundamental bearing on the extent and nature of innovations. Innovation can, however, occur across a broad range of situations in terms of land ownership and access legislation. These legal conditions can be negotiated through customary practices and individual agreements between land owners and innovators, to overcome potential land use problems and conflicts.

- Incremental innovations in products and processes are typical

As Voss and Zomerdijk (2007) observe, product and process innovations are closely interwoven and the incremental developments are important. The development and offer of new services needs new partnerships in business and in the institutional environment. Regional development programmes that are carried by institutional actors are often crucial in the initial stage. For the offer of guided tours or any outdoor activity, co-operation with marketing, transportation or catering businesses are necessary. Each enterprise offering a certain type of service has to adapt the model to the specific natural, institutional, business and market environment. These incremental adaptations increase the variety of services provided, improve their overall quality and help the development of new business models.

- Innovations are realised by cross-sectoral networks of actors

Cross-sectoral co-operation is one of the most important factors for innovation in new business fields of forest holdings (Kubeczko et al. 2006). The ideas for innovation and impulses for development come typically from the innovators themselves. In forest recreational service provision, these persons may come from outside as well as within the forestry sector, however a strong connection across the sectors involved is crucial. Although an entrepreneurial innovator stands in the centre as the driving force of the innovation process, a range of public and private actors are necessary to develop and implement the innovation successfully. Typically, we find a cross-sectoral working between forestry, tourism and economic development sectors with actors operating at a range of spatial scales, (local, regional, national and international level). In some instances, whilst forested land is used, there is no active involvement of forestry actors within the innovation process. This can lead to problems for the innovator in terms of a lack of influence over land use management activities, and for the land manager due to a lack of resources to instigate activities to promote recreational service provisions.

- Institutional support is needed from forestry agencies

There is a need for greater support in the development and diffusion of new product ideas and processes of innovation in forest recreation services. Institutional actors from the forestry sector should provide forest owners and managers with new business ideas and help them to develop a better understanding on how they could benefit from innovations in forest recreational services and how these services could be marketed to the potential clients. For this purpose, cross-sectoral co-operations and networks should be especially encouraged. This could gradually make forest owners to better understand the needs of potential customers, change their attitudes from fending off societal demands to taking them as business opportunities, and replace the functions-concept by an opportunity-driven diversification concept (Glück et al. 2000; Rametsteiner et al. 2005). Finally, forest policies would have to be better integrated with rural and regional development policies.

- New models are needed for the long-term cooperation on regional level

Forested landscapes have a large potential as a resource for tourism use. In order to realise this potential, investments in infrastructure are often needed on a regional scale which requires the coordination of many actors representing land owners and the tourism and hospitality sector. The coordination of actors and the financing of common activities such as the building of infrastructure or joint marketing measures need a stable cooperation structure in which the beneficiaries of the business activities are involved. One issue which has to be dealt within this cooperation is the redirection of money flows from those sectors directly benefiting from the new business activities such as hotels, gastronomy and tourism operators to those forest owners who provide the basic infrastructures like landscapes, roads or hiking trails.

The case studies presented in this paper illustrate the characteristics and processes of innovation in forest recreation service provision, and associated opportunities and constraints to the development and diffusion of ideas within this sector. Whilst it has begun to explore how institutional conditions impact upon innovation in forest recreation service provisions, more in-depth analyses of the opportunities and constraints to innovation according to institutional conditions at the country level are still required. Besides quantitative surveys, case studies of enterprises which illustrate particular opportunities and constraints of innovation according to the specific institutional contexts of the country or region, in which they take place, should be developed.

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